



Sheet 4 of 4 sheet(s)

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. APPM/5351	Serial No. 09/885,609
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant MAK, et al.	Confirmation No.: 5337
(Use several sheets if necessary)		Filing Date June 20, 2001	Group 2818
	Examiner Berry, Renee R.		

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
MN	A37	2002/0004293	01-10-2002	SOININEN, et al.	438	584	05-15-2001
MP	A38	2001/0054769	12-27-2001	RAAIJMAKERS, et al.	257	758	04-26-2001
MD	A39	2001/0029094	10-11-2001	MEE-YOUNG, et al.	438	597	09-16-1999
MD	A40	2001/0024387	09-27-2001	RAAIJMAKERS, et al.	365	200	02-22-2001
MD	A41	2001/0009695	07-26-2001	SAANILA, et al.	427	255.39	01-18-2001
MD	A42	2001/0002280	05-31-2001	SNEH	427	255.28	12-22-2000

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	B1						<input type="checkbox"/>	<input type="checkbox"/>
	B2						<input type="checkbox"/>	<input type="checkbox"/>
	B3						<input type="checkbox"/>	<input type="checkbox"/>

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
	C1	
	C2	
	C3	

Examiner Renee R. Berry Date Considered 11-10-03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5351/CPI/L/B/ PJS	Serial No. 09/885,609	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT					Applicant Mak, et al.	Confirmation No.: 5337	
(Use several sheets if necessary)					Filing Date May 12 2003	Group 2818	
Examiner R. Berry					June 20, 2001		
U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
<i>Mak</i>	A1	6,548,424	04/15/03	Putkonen	438	785	04/16/01
<i>Mak</i>	A2	6,534,395	03/18/03	Werkhoven, et al.	438	627	03/06/01
<i>Mak</i>	A3	6,511,539	01/28/03	Raaijmakers, et al.	117	102	09/08/99
<i>Mak</i>	A4	6,468,924	10/22/02	Lee, et al.	438	763	05/31/01
<i>Mak</i>	A5	6,458,701	10/01/02	Chae, et al.	438	680	10/12/00
<i>Mak</i>	A6	6,416,577	07/09/02	Suntoloa, et al.	117	88	06/07/00
<i>Mak</i>	A7	6,399,491	06/04/02	Jeon, et al.	438	680	04/06/01
<i>Mak</i>	A8	6,372,598	04/16/02	Kang, et al.	438	399	06/16/99
<i>Mak</i>	A9	6,348,376	02/19/02	Lim, et al.	438	253	01/19/01
<i>Mak</i>	A10	6,342,277	01/29/02	Sherman	427	562	04/14/99
<i>Mak</i>	A11	6,333,260	12/25/01	Kwon, et al.	438	643	06/24/99
<i>Mak</i>	A12	6,287,965	09/11/01	Kang, et al.	438	648	02/23/00
<i>Mak</i>	A13	6,207,487	03/27/01	Kim, et al.	438	238	10/12/99
<i>Mak</i>	A14	6,197,683	03/06/01	Kang, et al.	438	643	09/18/98
Foreign Patent Documents							
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation
							YES <input type="checkbox"/> NO <input type="checkbox"/>
<i>Mak</i>	B1	02/45167	06/06/02	WO	H01L	27/00	<input type="checkbox"/> <input type="checkbox"/>
<i>Mak</i>	B2	02/067319	08/29/02	WO	H01L	21/768	<input type="checkbox"/> <input type="checkbox"/>
<i>Mak</i>	B3	00/79576	12/28/00	WO	H01L	21/205	<input type="checkbox"/> <input type="checkbox"/>
OTHER ART							
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.					
<i>Mak</i>	C1	Rossnagel, et al. "Plasma-enhanced Atomic Layer Deposition of Ta and Ti for Interconnect Diffusion Barriers," J. Vacuum Sci. & Tech. B., Vol. 18, No. 4 (July 2000), pp. 2016-20					
<i>Mak</i>	C2	Ritala, et al. "Atomic Force Microscopy Study of Titanium Dioxide Thin Films Grown by Atomic Layer Epitaxy," Thin Solid Films, Vol. 228, No. 1-2 (15 May 1993), pp.32-35					
Examiner	<i>R. Berry</i>	Date Considered 11-10-03					
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.							

Sheet 2 of 3 sheet(s)

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. AMAT/5351/CPI/L/B/ PJS	Serial No. 09/885,609
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant Mak, et al.	Confirmation No.: 5337
(Use several sheets if necessary)		'MAY 12 2003 PATENT & TRADEMARK OFFICE JC671	Filing Date June 20, 2001
Examiner R. Berry		Group 2818	

U.S. Patent Documents

*Examiner Initial	Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
M	A1 6,042,652	03/28/00	Hyun, et al.	117	719	09/07/99
M	A2 5,526,244	06/11/96	Bishop	362	147	05/24/93
M	A3 2003/0082300	05/01/03	Todd, et al.	427	255.27	02/11/02
M	A4 2003/0072975	04/17/03	Shero, et al.	428	704	09/26/02
M	A5 2003/0049942	03/13/03	Haukka, et al.	438	778	08/22/02
M	A6 2003/0032281	02/13/03	Werkhoven, et al.	438	640	09/23/02
M	A7 2003/0031807	02/13/03	Elers, et al.	427	569	09/17/02
M	A8 2003/0013320	01/16/03	Kim, et al.	438	778	05/31/01
M	A9 2002/0187631	12/12/02	Kim, et al.	438	637	12/05/01
M	A10 2002/0187256	12/12/02	Elers, et al.	427	99	07/30/02
M	A11 2002/0182320	12/05/02	Leskela, et al.	427	250	03/15/02
M	A12 2002/0177282	11/28/02	Song	438	300	12/18/01
M	A13 2002/0135071	09/26/02	Kang, et al.	257	767	01/16/02
M	A14 2002/0121697	09/05/02	Marsh	257	751	04/30/02

Foreign Patent Documents

*Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation	
						YES	NO
M	B1 00/15865	03/23/00	WO	C23C	16/00	<input type="checkbox"/>	<input type="checkbox"/>
M	B2 99/29924	06/17/99	WO	C23C	16/04	<input type="checkbox"/>	<input type="checkbox"/>
M	B3 99/01595	01/14/99	WO	C30B	25/14	<input type="checkbox"/>	<input type="checkbox"/>

OTHER ART

*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.		
M	C1 Ritala, et al. "Growth of Titanium Dioxide Thin Films by Atomic Layer Epitaxy," Thin Solid Films, Vol. 225, No. 1-2 (25 March 1993) pp. 288-95		
M	C2 Min, et al. "Chemical Vapor Deposition of Ti-Si-N Films With Alternating Source Supply," Mat. Rec. Soc. Symp. Proc. Vol. (1999)		

Examiner R. Berry Date Considered 11/10/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. AMAT/5351/CPI/L/B/ PJS	Serial No. 09/885,609
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant Mak, et al.	Confirmation No.: 5337
(Use several sheets if necessary)		Filing Date MAY 17 2003	Group
	Examiner R. Berry	June 20, 2001	2818

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
MAB	A1	2002/0109168	08/15/02	Kim, et al.	257	295	01/30/02
OIPE MAB JCB	A2	2002/0106536	08/08/02	Lee, et al.	428	702	02/02/01
MAB 6/17/03	A3	2002/0105088	08/08/02	Yang, et al.	257	774	10/31/01
MAB	A4	2002/0081844	06/27/02	Jeon, et al.	438	680	02/28/02
MAB	A5	2002/0076837	06/20/02	Hujanen, et al.	438	3	11/28/01
MAB	A6	2002/0076507	06/20/02	Chiang, et al.	427	569	10/24/01
MAB	A7	2002/0074588	06/20/02	Lee	257	306	07/06/01
MAB	A8	2002/0061612	05/23/02	Sandhu, et al.	438	151	01/14/02
MAB	A9	2002/0048635	04/25/02	Kim, et al.	427	331	08/08/99
MAB	A10	2002/0021544	02/21/02	Cho, et al.	361	200	08/07/01
MAB	A11	2002/0000598	01/03/02	Kang, et al.	257	301	07/26/01
MAB	A12	2001/0054730	12/27/01	Kim, et al.	257	301	05/23/01
MAB	A13	2001/0050039	12/13/01	Park	117	102	06/05/01
MAB	A14	2001/0028924	09/27/01	Raaijmakers, et al.	365	200	02/22/01

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
MAB	B1	98/51838	11/19/98	WO	C23C	16/06	<input type="checkbox"/>	<input type="checkbox"/>
MAB	B2	2001-111000	12/26/00	JP	H01L	29/00	<input type="checkbox"/>	<input type="checkbox"/>
MAB	B3	2,355,747	05/02/01	GB	C23C	16/44	<input type="checkbox"/>	<input type="checkbox"/>

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
MAB	C1	Klaus, et al. "Atomically Controlled Growth of Tungsten and Tungsten Nitride Using Sequential Surface Reactions," Applied Surface Science, 162-163 (2000) 479-491
MAB	C2	

Examiner R. Berry Date Considered 11/10/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. APPM/5351	Serial No. 09/885,609
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant MAK, et al.	Confirmation No.: 5337
(Use several sheets if necessary)		MAY 02 2003 PATENT & TRADEMARK OFFICE	Filing Date June 20, 2001
	Examiner Berry, Renee R.		Group 2818

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
MP	A1	6,482,740	11-19-2002	SOININEN, et al.	438	686	05-15-2001
MP	A2	6,482,733	11-19-2002	RAAIJMAKERS, et al.	438	633	04-26-2001
MP	A3	6,482,262	11-19-2002	ELERS, et al.	117	84	10-13-2000
MP	A4	6,475,910	11-05-2002	SNEH	438	685	09-22-2000
MP	A5	6,475,276	11-05-2002	ELERS, et al.	117	84	10-13-2000
MP	A6	6,455,421	09-24-2002	ITOH, et al.	438	656	07-31-2000
MP	A7	6,451,695	09-17-2002	SNEH	438	685	12-22-2000
MP	A8	6,451,119	09-17-2002	SNEH, et al.	118	715	11-29-2000
MP	A9	6,447,933	09-10-2002	WANG, et al.	428	635	04-30-2001
MP	A10	6,432,821	08-13-2002	DUBIN, et al.	438	678	12-18-2000
MP	A11	6,423,619	07-23-2002	GRANT, et al.	438	589	11-30-2001
MP	A12	6,420,189	07-16-2002	LOPATIN	438	2	04-27-2001
MP	A13	6,391,785	05-21-2002	SATTA, et al.	438	704	08-23-2000

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
MP	B1	WO 00/54320	09-14-2000	WIPO	H01L	21/44	<input type="checkbox"/>	X
	B2						<input type="checkbox"/>	<input type="checkbox"/>
	B3						<input type="checkbox"/>	<input type="checkbox"/>

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
	C1	
	C2	
	C3	

Examiner MP/RBR Date Considered 11-10-03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. APPM/5351	Serial No. 09/885,609
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant MAK, et al.	Confirmation No.: 5337
(Use several sheets if necessary)		MAY 02 2003 PATENT & TRADEMARK OFFICE	Filing Date June 20, 2001
	Examiner Berry, Renee R.		Group 2818

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
RRB	A14	6,369,430	04-09-2002	ADETUTU, et al.	257	382	04-02-2001
RRB	A15	6,368,954	04-09-2002	LOPATIN, et al.	438	627	07-28-2000
RRB	A16	6,358,829	03-19-2002	YOON, et al.	438	597	09-16-1999
RRB	A17	6,355,561	03-21-2002	SANDHU, et al.	438	676	11-21-2000
RRB	A18	6,284,646	09-04-2001	LEEM	438	629	08-19-1998
RRB	A19	5,989,623	11-23-1999	CHEN, et al.	427	97	09-19-1997
RRB	A20	5,972,179	10-26-1999	CHITTIPEDDI, et al.	204	192.17	09-30-1997
RRB	A21	5,306,666	04-26-1994	IZUMI	437	192	07-21-1993
RRB	A22	2002/0190168	12-19-2002	HALL, et al.	248	188.7	05-20-2002
RRB	A23	2002/0162506	11-07-2002	SNEH, et al.	118	715	06-28-2002
RRB	A24	2002/0155722	10-24-2002	SATTA, et al.	438	704	04-15-2002
RRB	A25	2002/0117399	08-29-2002	CHEN, et al.	205	125	02-23-2001

For Ign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	B1						<input type="checkbox"/>	<input type="checkbox"/>
	B2						<input type="checkbox"/>	<input type="checkbox"/>
	B3						<input type="checkbox"/>	<input type="checkbox"/>

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
	C1	
	C2	
	C3	

Examiner RRB Date Considered 11/18/03

'EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.'

O I P E JC134
MAY 8 2003

Sheet 3 of 4 sheet(s)

U.S. Department of Commerce, Patent and Trademark Office <i>(PMS)</i> Form 1449 modified)		Docket No. APPM/5351	Serial No. 09/885,609
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant MAK, et al.	Confirmation No.: 5337
(Use several sheets if necessary)		Filing Date June 20, 2001	Group 2818
Examiner Berry, Renee R.			

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
<i>MB</i>	A26	2002/0106846	08-08-2002	SEUTTER, et al.	438	200	02-02-2001
<i>MB</i>	A27	2002/0105088	08-08-2002	YANG, et al.	257	774	10-31-2001
<i>MB</i>	A28	2002/0090829	07-11-2002	SANDHU, et al.	438	761	01-21-2002
<i>MB</i>	A29	2002/0086507	07-04-2002	PARK, et al.	438	585	12-26-2001
<i>MB</i>	A30	2002-0076507	06-20-2002	CHIANG, et al.	427	569	10-24-2001
<i>MB</i>	A31	2002/0061612	05-23-2002	SANDHU, et al.	438	151	01-14-2002
<i>MB</i>	A33	2002-0055235	05-09-2002	AGARWAL, et al.	438	430	10-29-2001
<i>MB</i>	A34	2002/0048880	04-25-2002	LEE	438	253	08-08-2001
<i>MB</i>	A35	2002/0037630	03-28-2002	AGARWAL, et al.	438	430	10-29-2001
<i>MB</i>	A36	2002/0031618	03-14-2002	SHERMAN	427	569	10-09-2001
<i>MB</i>		2002/0019121	02-14-2002	PYO	438	618	06-20-2001

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	B1						<input type="checkbox"/>	<input type="checkbox"/>
	B2						<input type="checkbox"/>	<input type="checkbox"/>
	B3						<input type="checkbox"/>	<input type="checkbox"/>

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
	C1	
	C2	
	C3	

Examiner *Mak* Date Considered *11-18-03*

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.